State Revolving Fund Loan Programs
Drinking Water, Wastewater, Nonpoint Source

ENVIRONMENTAL ASSESSMENT
AND
FINDING OF NO SIGNIFICANT IMPACT

CITY OF GREENSBURG
RAW WATER TRANSMISSION MAIN
PRELIMINARY ENGINEERING REPORT AMENDMENT #1
STATE REVOLVING FUND PROJECT #: DW 07 03 16 03

DATE: March 19, 2010

TARGET PROJECT APPROVAL DATE: April 19, 2010

I. INTRODUCTION

The above entity has applied to the Drinking Water State Revolving Fund (DWSRF) Loan Program to amend its current loan to finance all or part of the drinking water project described in the accompanying Environmental Assessment (EA). As part of facilities planning requirements, an initial environmental review has been completed which addresses the project's impacts on the natural and human environment. This review is summarized in the attached EA, which can also be viewed at http://www.in.gov/ifa/srf/.

II. PRELIMINARY FINDING OF NO SIGNIFICANT IMPACT (FNSI)

The DWSRF has evaluated all pertinent environmental information regarding the proposed project and determined that an Environmental Impact Statement is not necessary. Subject to responses received during the 30-day public comment period, and pursuant to Indiana Code 4-4-11, it is our preliminary finding that the construction and operation of the proposed facilities will result in no significant adverse environmental impact. In the absence of significant comments, the attached EA shall serve as the final environmental document.

III. COMMENTS

All interested parties may comment upon the EA/FNSI. Comments must be received at the address below by the deadline date above. Significant comments may prompt a reevaluation of the preliminary FNSI; if appropriate, a new FNSI will be issued for another 30-day public comment period. A final decision to proceed, or not to proceed, with the proposed project shall be effected by finalizing, or not finalizing, the FNSI as appropriate. Comments regarding this document should be sent within 30 days to:

Max Henschen
Senior Environmental Manager
State Revolving Fund Loan Program
100 N. Senate Ave., IGCN 1275
Indianapolis, IN 46204
317-232-8623; mhensche at ifa.in.gov

ENVIRONMENTAL ASSESSMENT

I. PROJECT IDENTIFICATION

Project Name and Address:	**City of Greensburg** Raw Water Transmission Main Amendment #1 314 West Washington Street Greensburg, Indiana 47240
SRF Project Number:	DW07 03 16 03
Authorized Representative:	Gary Herbert, Mayor

II. PROJECT LOCATION

Greensburg originally proposed to construct a 24-inch raw water transmission main from the Flat Rock River Intake Facility approximately eight miles northwest of Greensburg to the New Ground Water Treatment Plant and the existing Surface Water Plant, both of which are in the vicinity of Fourth Street and Ireland Street. The Preliminary Engineering Report (PER) describing that project was approved for funding by the State Revolving Fund (SRF) Loan Program on April 17, 2008.

Amendment #1 to the approved PER proposes a revision of a small portion of the raw water transmission route, which will be placed in a 30-foot wide easement, using a 10-foot construction corridor width. The eastern portion of the original raw water main route, as well as the revised route, is shown on Figure 1; Figure 2 is a close up view of the revised route area. The re-routed portion of the project is located in the Forest Hill USGS quadrangle, T11N, R9E, south half of the NE ¼ of Section 34, as well as the Greensburg USGS quadrangle, T11N, R9E, south half of the NW ¼ of Section 35.

III. PROJECT NEED AND PURPOSE

The project is needed to meet a projected 3.9 million gallons per day (MGD) average daily water demand and a 4.8 MGD maximum daily demand by existing and future needs in the Greensburg service area, including the Honda assembly plant. The city's capacity to provide raw water for storage and eventual treatment is partially limited by the size of the existing 14-inch cast iron raw water main, which conveys raw water from the Flatrock River Intake facility to the Upland storage reservoir or to the city for treatment.

Amendment #1 revises the location of approximately 6,500 feet of the water transmission line due to easement acquisition issues. The city has obtained the easements necessary to construct the raw water line in the new route.

IV. Project Description

The approved project proposed installation of 48,000 feet of 24-inch ductile iron water main. After the new main was installed, the existing 14-inch line would remain in service as an auxiliary line. The new raw water main will connect to the city via the Low Service Pump Station at the Upland Reservoir.

Amendment #1 revises the location of approximately 6,500 feet of raw water transmission line beginning at the crossing of Muddy Fork Sand Creek/I-74 and running east, south of I-74 and south into the city.

V. Estimated Project Costs, Affordability and Funding

A. Selected Plan Estimated Cost Summary

The city has not yet closed a loan for the raw water main project with the SRF. The revised water main route has not changed the approved project costs as listed in the Environmental Assessment of March 17, 2008:

Construction Costs	
48,000 feet 24-inch Ductile Iron Pipe	$4,956,000
Creek Crossings	100,000
Highway Boring	480,000
	$5,536,000
contingencies	554,000
subtotal	$6,090,000
Non-Construction Costs	
Engineering, legal and accounting	1,218,000
Total Estimated Project Cost	**$7,310,000**

B. Greensburg will fund the project using local funds and the balance remaining in SRF Loan WW07 03 16 03, which the city closed on September 28, 2007 for $7,880,000; as of March 17, 2010, that loan balance was $1,978,266.

VI. Description of Evaluated Alternatives

No Action: The no-action alternative would not provide the needed supply capacity and therefore was rejected.

Water supplies from neighboring water utilities: This alternative was rejected because of cost and inadequate raw water supply.

Install new raw water main: This is the selected alternative. This project is part of a larger plan to address area water needs.

VII. Environmental Impacts of the Feasible Alternatives

A. Direct Impacts of Construction and Operation

Archaeological Resources: An archaeological survey of the revised water main route indicated that the revised project will not affect archaeological resources.

Structural Resources (Figure 3): The revised route will not affect historic structures or sites. Audible or visual effects on such sites will be temporary. The SRF's finding pursuant to Section 106 of the National Historic Preservation Act is: "no historic properties affected."

Plants and Animals: The revised route will not affect endangered plants or animals. Approximately 2,000 feet east of North CR 100 West (aka Moscow Road), a small cluster of trees will likely require removal for installation of 60 feet of the rerouted water main.

Surface Waters (figures 1, 2 and 4): The revised route will affect an ephemeral stream near a recently constructed detention basin where the route turns south into the city. The stream will be crossed three times by open-cut, since this is much less costly than directional drilling. The crossings can be accomplished in one day. Figure 2 illustrates the 10-foot wide stream crossings.

Wetlands (Figure 4): Approximately 40 feet of water main will be installed via open-cut across a presumed wetland. The wetland has not been formally delineated, but is characterized by herbaceous vegetation with less than 2% saplings. Installation through this area will affect fewer than 0.01 acres. After construction, the natural vegetation will be allowed to return.

100-Year Floodplain: The revised route will not be in a 100-year floodplain.

Groundwater: Groundwater will not be negatively affected by the re-routed portion of the project.

Prime Farmland: The rerouted portion of the raw water main will not convert prime farmland.

Air Quality: Air quality will be temporarily impacted by construction activities, including vehicle exhaust and dust.

Open Space and Recreational Opportunities: The project's construction and operation will neither create nor destroy open space and recreational opportunities.

The project will not affect National Natural Landmarks.

B. Indirect Impacts

The city's revised Environmental Evaluation of the project, amending the SRF-approved PER states: *"Both the City of Greensburg and Decatur County have competent planning and zoning departments and strive to protect sensitive environmental resources, including*

wetlands, 100-year floodplains, forested areas and inventoried historic/architectural sites from future growth. Protection of these resources will be accomplished through appropriate zoning ordinances, proper planning practices and appropriate mitigation."

C. Comments from Environmental Review Authorities

The **Natural Resources Conservation Service**, in correspondence dated January 27, 2010, noted that the revised water main route would not convert prime farmland.

The **U. S. Fish and Wildlife Service**, after reviewing the original water main project from the Flatrock River intake to the city treatment plants, stated in correspondence dated February 27, 2008:

The route segment between the water intake and the first excavated stream crossing is forested and appears to require tree clearing. Riparian tree removal would also be required at 3 of the excavated stream crossings. The only wetlands identified within the construction limits are 2 small linear emergent wetlands within a ditch. Potential impacts include disruption of aquatic habitat, water quality and riparian habitat at the excavated stream crossings. For excavated crossings, riparian disruption would be permanent due to the need for pipeline maintenance access.

We recommend the following measures to further minimize impacts on wildlife habitat:

1. *Use directional drilling at the westernmost intermittent stream crossing. Two forested headwater streams come together at this location and the riparian forest is very wide.*

2. *Install excavated stream crossings during the dry season or otherwise during times of minimal flow.*

3. *Install excavated stream crossings sufficiently deep to prevent pipeline exposure from stream channel downcutting.*

4. *Install the water line as close to US 421 as possible in the forested route segment between the water intake and the first excavated stream crossing.*

5. *Use best management practices during construction to prevent soil erosion and runoff to streams.*

6. *Revegetate disturbed soils immediately after construction, using native vegetation beneficial to wildlife in riparian zones.*

Endangered Species: The proposed project is within the range of the federally endangered Indiana bat (Myotis sodalis). While some foraging habitat may exist in the project area, we concur that the proposed project is not likely to adversely affect this listed species.

This precludes the need for further consultation on this project as required under Section 7 of the Endangered Species Act of 1973, as amended. If, however, new

information on endangered species at the site becomes available or if project plans are changed significantly, please contact our office for further consultation.

The **IDNR Division of Historic Preservation and Archaeology** (DHPA), after reviewing the original water main project from the Flatrock River intake to the city treatment plants, stated in correspondence dated December 18, 2007:

In terms of archaeological resources, we concur with the conclusions and recommendations of the archaeological report that sites 12De718-12De721, 12De723-12De725, 12De728-735, and 12De737 do not appear eligible for inclusion in the National Register of Historic Places. Therefore, no further archaeological investigations are necessary for these sites. However, sites 12De722, 12De726, 12De727, and 12De736 appear potentially eligible for inclusion in the National Register of Historic Places. These sites must be avoided by all project activities or subjected to further archaeological investigations. It is our understanding that the current proposed project has been modified to avoid all these sites.

If any archaeological artifacts or human remains are uncovered during construction, demolition, or earthmoving activities, state law (Indiana Code 14-21-1-27 and 29) requires that the discovery must be reported to the Department of Natural Resources within two (2) business days. In that event, please call (317) 232-1646. Be advised that adherence to Indiana Code 14-21-1-27 and 29 does not obviate the need to adhere to applicable federal statutes and regulations.

In regard to buildings and structures, we have identified the following property within the probable area of potential effects, and we believe that it meets the criteria of eligibility for inclusion in the National Register of Historic Places due to its historical and architectural significance:

> *J.D. Pleak House, 3321 N. U.S. 421 (site #031-003-10092) is significant as an outstanding example of the adaptation of High Style architecture to the five bay I-House formation.*

In addition, we have identified the following property within the probable area of potential effects, and we believe that it may meet the criteria of eligibility for inclusion in the National Register of Historic Places:

> *House, 4717 SR 421 (site #031-003-10073) is significant as an example of a masonry I-House.*

However, based on the information provided to our office, we do not believe that the aforementioned historic properties will be altered, demolished, or removed by the proposed project.

Commenting on the revised route and its archaeological survey, the DHPA stated:
We noted that the project was originally reviewed in 2007 and has now been modified to include an alternate route for a section of the proposed water main along I-74 and an ephemeral stream.

In terms of the archaeology, we concur that sites 12De970 and 12De971 do not appear eligible for inclusion in the National Register of Historic Places. We have also noted that sites 12De41 and 12De42 were recorded within or adjacent to the proposed project area. These sites may have been disturbed during the construction of Interstate 74 and/or were part of the sites recorded during this survey (Stillwell, 7/23/09). No further archaeological investigations appear necessary for this part of the proposed project. However, in our letter dated December 18, 2007, it is our understanding that the proposed project will avoid sites 12De722, 12De726, 12De727, and 12De736 recorded by IPFW (Indiana University-Purdue University at Fort Wayne)-Archaeological Survey (Arnold/McCullough, 8/31/07).

Based on our analysis, it has been determined that no historic properties will be altered, demolished , or removed by the proposed project provided that sites 12De722, 12De726, 12De727, and 12De736 are avoided.

If any archaeological artifacts or human remains are uncovered during construction, demolition, or earthmoving activities, state law (Indiana Code 14-21-1-27 and 29) requires that the discovery must be reported to the Department of Natural Resources within two (2) business days. In that event, please call (317) 232-1646.

The **IDNR Environmental Unit**, after reviewing the original water main project from the Flatrock River intake to the city treatment plants, stated in correspondence dated March 14, 2008:

The Indiana Department of Natural Resources has reviewed the above referenced project per your request. Our agency offers the following comments for your information and in accordance with the National Environmental Policy Act of 1969.

Regulatory Assessment: This proposal will require the formal approval of our agency for construction in a floodway pursuant to the Flood Control Act (IC 14-28-1), unless it qualifies for utility exemption under Administrative Rule 312 IAC 10-5-4. Please include a copy of this letter with the permit application (if required).

Natural Heritage Database: The Natural Heritage Program's data have been checked. To date, no plant or animal species listed as state or federally threatened, endangered, or rare have been reported to occur in the project vicinity.

Fish & Wildlife Comments: We recommend that the directional bore method be used for all creek crossings, where possible. To avoid the need to clear trees and eliminate forested habitat, the bore pits should be located landward of the creek's forested riparian corridor on both sides of the creek.
Place the line within the cleared road right-of-way where feasible. Where forested areas are adjacent to the road, place the line on the side of the road containing the least amount of woody vegetation/forested areas. To minimize habitat fragmentation, where forested habitat clearing will be necessary, the line easement should be placed along the outside edge of the forested area.

Placement of the easement within a forested area may create narrow corridors of fragmented or functionally degraded habitat between the line easement and the road's cleared right-of-way.

Right of way clearing for periodic inspection and maintenance should be limited to as narrow an area as possible. Temporary and permanent impacts to forested habitat need to be mitigated at the same ratio. Impacts to non-wetland forest under 1 acre should be mitigated at a 1:1 ratio. Impacts to non-wetland forest over 1 acre should be mitigated at a minimum 2:1 ratio. Coordination with the US Army Corps of Engineers and the Indiana Department of Environmental Management is recommended when a project will impact wetlands or potential wetlands. Wetland impacts should be mitigated at the appropriate ratio (see http://www.in.gov/legislative/register/20061213-IR-312060562NRA.xml.pdf).

Temporary stream crossings should be designed to minimize obstruction of the channel. The cross-sectional area of the culvert pipes used should be similar to the cross-sectional area of the channel at normal flow to minimize flow acceleration, which could cause stream bed scouring, and to allow unimpaired upstream fish movement.

In addition to the above recommendations, fish, wildlife, and botanical resource losses as a result of this project can be minimized through implementation of the following measures.

Revegetate all bare and disturbed areas with a mixture of grasses (excluding all varieties of tall fescue), legumes, and native shrub and hardwood tree species as soon as possible upon completion.

Minimize and contain within the project limits in-channel disturbance and the clearing of trees and brush.

Do not work in the waterway from April 1 through June 30 without prior written approval of the Division of Fish and Wildlife.

Use minimum average 6 inch graded riprap stone extended below the normal water level to provide habitat for aquatic organisms in the voids.

Appropriately designed measures for controlling erosion and sediment must be implemented to prevent sediment from entering the stream or leaving the construction site; maintain these measures until construction is complete and all disturbed areas are stabilized.

Do not cut any trees suitable for Indiana bat roosting (greater than 5 inches in diameter, living or dead, with loose hanging bark) from April 1 through October 1.

Seed and protect all disturbed streambanks and slopes that are 3:1 or steeper with erosion control blankets (follow manufacturer's recommendations for installation); seed and apply mulch on all other disturbed areas.

VIII. MITIGATION MEASURES

The city's approved PER states:

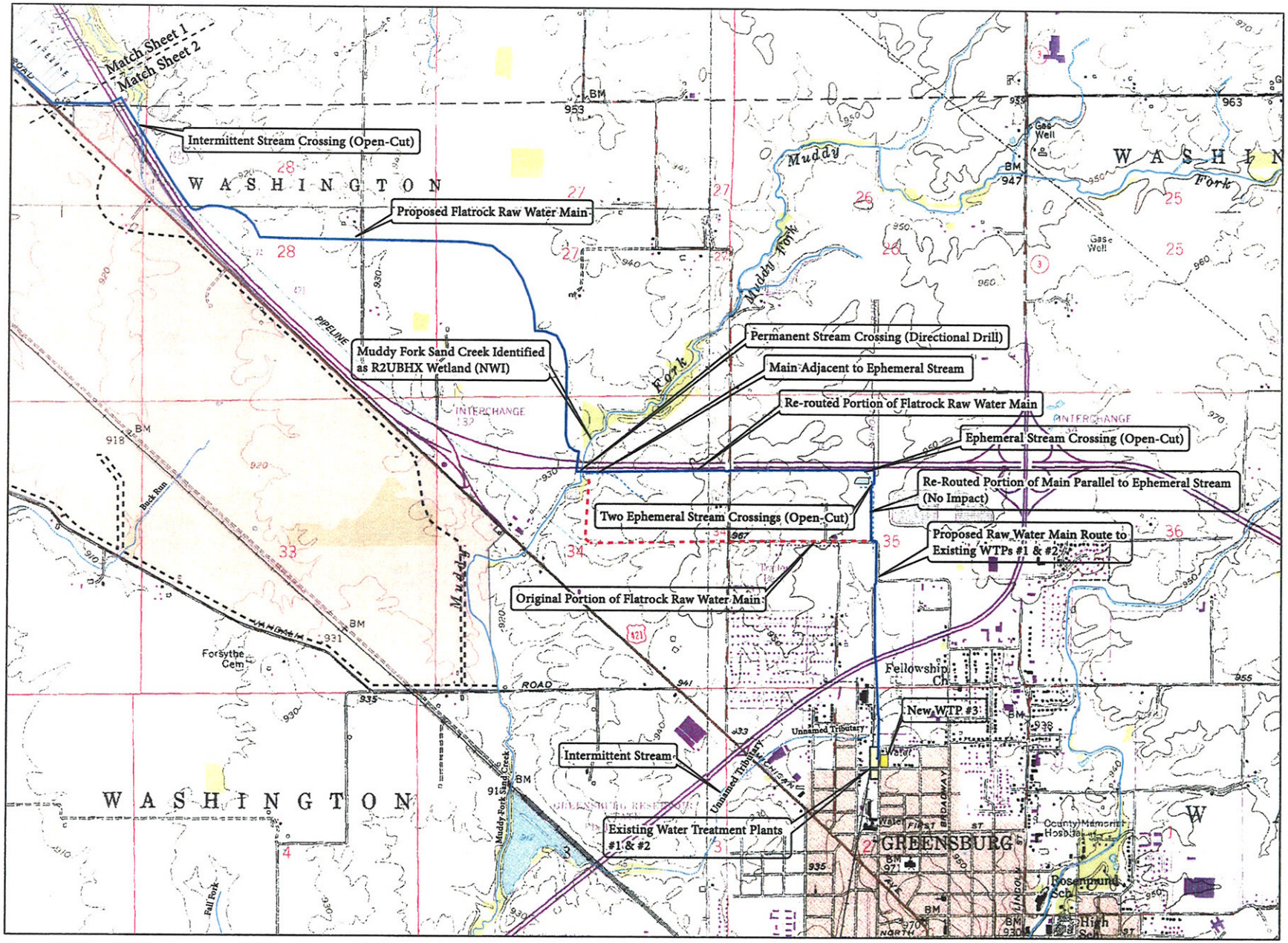
Noise impacts from construction activities would be minimized. The hours of construction activity will be limited to daylight hours (except in case of an emergency) to minimize noise disturbances. Proper cleanup practices will be required to reduce the creation of dust or other construction debris nuisances. In general, efforts will be made to avoid construction-related impacts. Where an impact cannot be avoided, appropriate mitigation measures will be utilized. A Rule 5 [Stormwater Pollution Prevention] *Plan will be prepared for the entire water main project (including the re-routed corridor) in order to reduce erosion and contamination resulting from construction.*

Mitigation methods for construction may include, but are not limited to, the following:

- *Piping installation methods, including jacking and boring and horizontal directional drilling, will be implemented where practical in specific locations to avoid significant impacts to wetlands, creeks, wooded areas, and roadway traffic.*
- *Appropriate erosion control measures, which may include sediment basins, staked hay bales, rip-rap, seeding, mulching, etc., will be utilized, inspected, and maintained during and after construction where necessary.*
- *Drainage systems will be stabilized as early as possible to avoid sedimentation.*
- *Surface and subsurface drainage patterns will be restored as early as possible.*
- *Measures will be taken to avoid excessive construction debris and soil being tracked onto existing roadways.*
- *Areas of exposed soil will be wetted periodically as needed to control dust.*

IX. PUBLIC PARTICIPATION

Greensburg has discussed the raw water line route modification at several public Water Board meetings on July 21, 2009, December 15, 2009, January 12, 2010 and January 19, 2010.



Legend

- Intermittent Stream
- Field Verified Ephemeral Stream
- Proposed Raw Water Main
- Original Proposed Raw Water Main
- Utility Corridor
- Piping
- Waterway
- Man-Made Detention Basin
- Honda Property
- Upland Reservoir
- Existing WTP
- WTP #3

FIGURE 1

FLATROCK RAW WATER MAIN
TOPOGRAPHIC MAP

WATERWORKS IMPROVEMENTS PROGRAM PER
CITY OF GREENSBURG, INDIANA
NOVEMBER 2006
REVISED JAN. 2010

HNTB

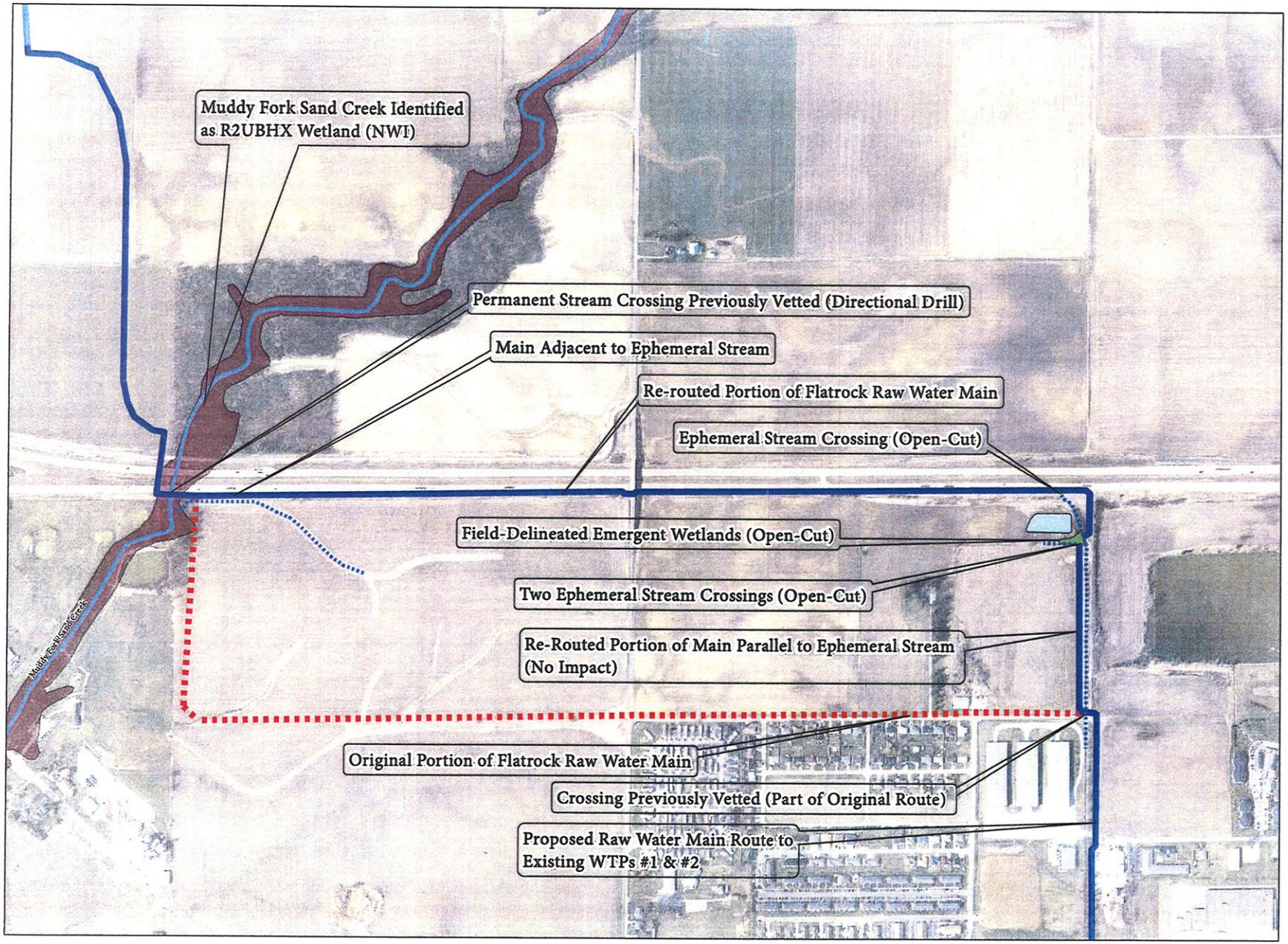


FIGURE 2

FLATROCK RAW WATER MAIN
CLOSE-UP VIEW OF CORRIDORS

WATERWORKS IMPROVEMENTS PROGRAM PER
CITY OF GREENSBURG, INDIANA
NOVEMBER 2006
REVISED MAR. 2007, JUN. 2007, JAN. 2010

HNTB

Washington Township (20001-037)

FIGURE 3

(from DCIR, 1999)
Revised Jan. 2010

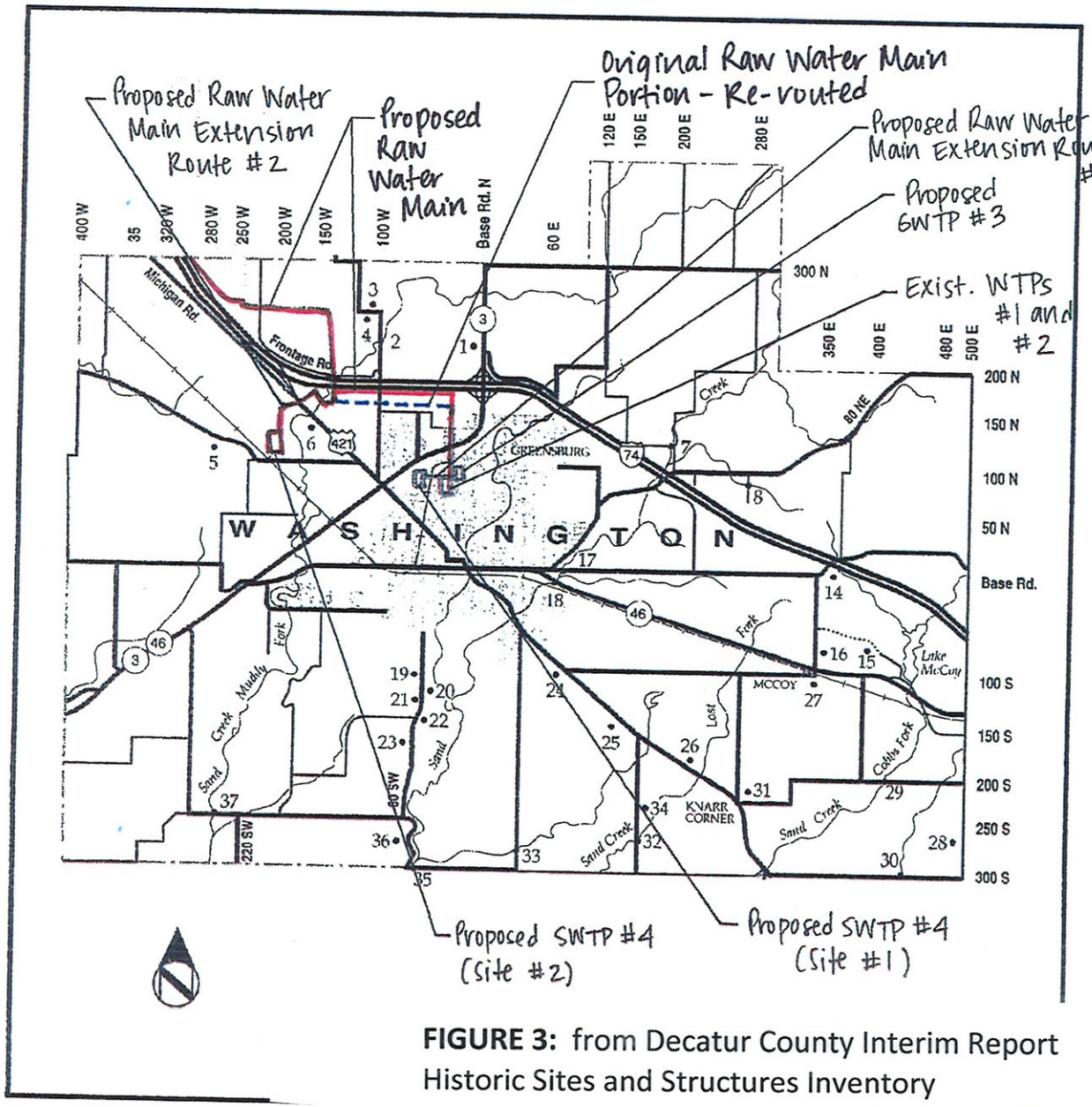


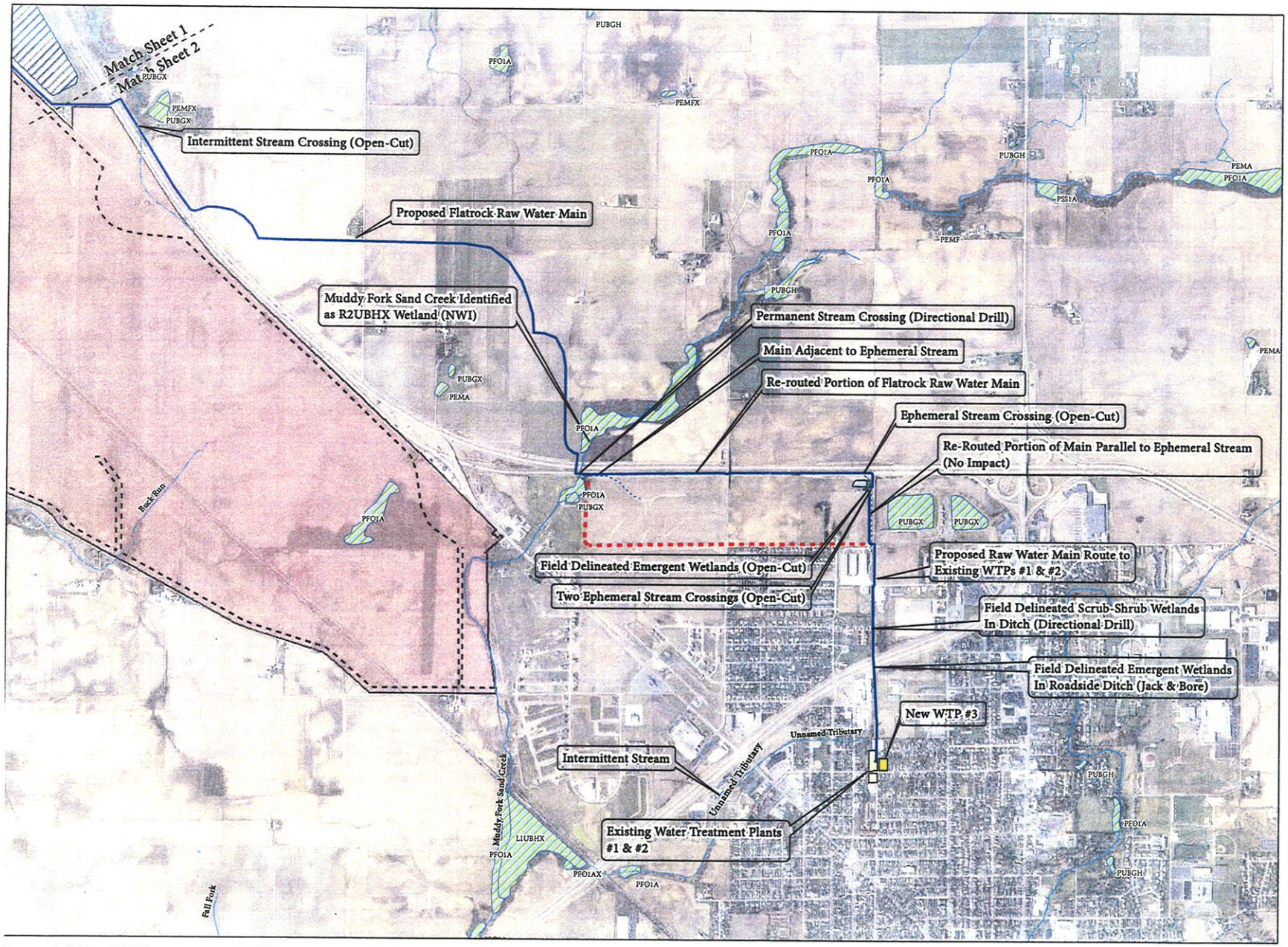
FIGURE 3: from Decatur County Interim Report
Historic Sites and Structures Inventory

Washington Township is characterized by good roads, productive soil, the location of the county seat, and adequate shipping facilities. Located in almost the exact center of Decatur County, Washington Township contains about 54 square miles. It was laid out in May of 1822. The township was originally larger than it is today as Salt Creek, Marion, Jackson, and Sand Creek townships were subsequently formed from it. The first land entry was made in Washington Township in October of 1820 by Thomas Hendricks.

There are many well-preserved Italianate farmhouses remaining (20001, 20006, 20016, 20027, 20028, 20034) in Washington Township. Noteworthy also are the 1864 Walter Pleak house (20004), the F. Robbins farm (20019), the J. Robbins farm (20021), the Duncan farm (20023), and the Foley farm (20025). Similar houses owned by members of the Hamilton family are listed separately as the Hamilton Family Rural Historic District following the township catalogue.

The only round barn in Decatur County is in Washington Township just northwest of Greensburg. The Strauther Pleak Round Barn (20003) was built in 1911 (see cover). Its three-tiered structure gives it the appearance of a wedding cake.

Besides Greensburg, McCoy is the only other town in Washington Township. It was laid out by J. C. Adams in 1871 along the railroad. The town was platted with several streets and thirteen lots, but today only a few houses remain, including an 1886 Italianate farmhouse (20027). There were never any businesses in McCoy.



Legend

- Intermittent Stream
- Field Verified Ephemeral Stream
- Field Verified Wetland
- NWI Wetlands
- Proposed Raw Water Main
- Original Proposed Raw Water Main
- Utility Corridor
- Piping
- Waterway
- Man-Made Detention Basin
- Honda Property
- Upland Reservoir
- Existing WTP
- WTP #3

FIGURE 4

FLATROCK RAW WATER MAIN WETLANDS

WATERWORKS IMPROVEMENTS PROGRAM PER CITY OF GREENSBURG, INDIANA
NOVEMBER 2006
REVISED MAR. 2007, JUN. 2007, JAN. 2010

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